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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,928	04/01/2004	Kerry D. Hinson	60680-1780	2927
10291 7590 01/05/2007 RADER, FISHMAN & GRAUER PLLC 39533 WOODWARD AVENUE SUITE 140 BLOOMFIELD HILLS, MI 48304-0610			EXAMINER SHARP, JEFFREY ANDREW	
			ART UNIT 3677	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE			MAIL DATE	DELIVERY MODE
3 MONTHS			01/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/708,928	Applicant(s) HINSON ET AL.	
	Examiner Jeffrey Sharp	Art Unit 3677	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-8,10-19 and 21 is/are pending in the application.
- 4a) Of the above claim(s) 13-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-8,10-12¹⁹ and 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 May 2005 and 10 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

[1] This action is responsive to Applicant's remarks/amendment/request for continued examination filed on 05 October 2006 with regard to the advisory action mailed on 18 September 2006.

Status of Claims

[2] Claims 1, 3-8, 10-19, and 21 are pending. Claims 13-18 are withdrawn from further consideration.

Specification

[3] The disclosure was previously objected to for informalities. Applicant has successfully addressed these issues in the amendment filed on 05 September 2006. Accordingly, the objection to the specification has been withdrawn.

Response to Arguments/Remarks

[4] Claims 1, 3-9, 11, 12, and 20 were previously rejected under 35 U.S.C. 102(b) as being anticipated by JP 05180005.

Applicant's arguments/remarks with regard to this rejection have been fully considered, but are not persuasive, for the same reasons claim 9 was rejected in the previous office action. One of ordinary skill in the art would broadly construe an engine "component" as any washer, fastener, member, or item found on an engine. JP 05180005 teaches or at least strongly suggests, a retention sleeve (10b), wave spring (10c) disposed about the retention sleeve (10b), and a threaded fastener (10e) extending therethrough.

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It is to be strongly noted that Applicant claims in the preamble, a fastener assembly "FOR coupling at least two components of an engine", thereby suggesting an intended use of the fastener assembly. Accordingly, no such components are positively claimed. Moreover, the claims state that the retention sleeve "SELECTIVELY extends at least partially" into both apertures of the components, suggesting that the retention sleeve is inserted through the two engine components as a matter of *choice* only. Therefore, it is made clear that such "engine components" are not positively claimed, as they are merely an advantageous use of the positively recited fastener assembly. Consequently, all arguments and amendments drawn to the interaction between the fastener assembly and engine components are not persuasive and do not patentably define the claims over the cited prior art of record. Such arguments include, but are not limited to those regarding a seal between unclaimed components, and the retention sleeve having an outer diameter larger than the unclaimed first engine component (10d).

After close re-consideration of the JP 05180005 reference, the Examiner acknowledges Applicant's remark that it appears retention sleeve (10b) does not protrude through the aperture of engine component (10d).

[5] Claims 1, 3, 4, 6-9, 11, 12, and 20 were previously rejected under 35 U.S.C. 102(b) as being anticipated by, or under 35 U.S.C. 103(a) as being obvious over JP 11050842.

Applicant's arguments/remarks with regard to this rejection have been fully considered, but are not persuasive, for the same reasons claim 9 was rejected in the previous office action. One of ordinary skill in the art would broadly construe an engine "component" as any washer, fastener, member, or item found on an engine. JP 11050842 teaches or at least strongly suggests,

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a retention sleeve (3) extending at least partially through an aperture formed in at least two engine components (first engine component 5, and second engine component 1). JP 11050842 also teaches or at least strongly suggests, a retention sleeve (3), wave spring (6) disposed about the retention sleeve (3), and a threaded fastener (4) extending therethrough. Lastly, JP 11050842 teaches or at least suggests a seal between components (1) and (2), which is facilitated by the wave spring (6).

It is to be strongly noted that Applicant claims in the preamble, a fastener assembly "FOR coupling at least two components of an engine", thereby suggesting an intended use of the fastener assembly. Accordingly, no such components are positively claimed. Moreover, the claims state that the retention sleeve "SELECTIVELY extends at least partially" into both apertures of the components, suggesting that the retention sleeve is inserted through the two engine components as a matter of *choice* only. Therefore, it is made clear that such "engine components" are not positively claimed, as they are merely an advantageous use of the positively recited fastener assembly. Consequently, all arguments and amendments drawn to the interaction between the fastener assembly and engine components are not persuasive and do not patentably define the claims over the cited prior art of record. Such arguments include, but are not limited to those regarding a seal between unclaimed components.

[6] Claim 5 was previously rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11050842 in view of the old and well-known.

Applicant's arguments/remarks with regard to this rejection have been fully considered, but are not persuasive, for at least the reasons stated above, and for the same reasons outlined in

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the previous office action. It is well-known to make springs and other components from steel, and it has been held by the courts to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

[7] Claims 10, 19, and 21 were previously rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11050842 or JP 05180005 in view of Schmidt, Jr. US-5,711,711.

Applicant's arguments/remarks with regard to this rejection have been fully considered, but are not persuasive, for at least the reasons stated above, and for the same reasons outlined in the previous office action. Schmidt, Jr. suggests employing a similar fastener assembly in combination with a valve cover, and further suggests an inside portion of a retention sleeve being smaller than a threaded fastener for the purposes of captivation and loss prevention. It would be disadvantageous to have a bolt drop into an open engine during assembly/disassembly.

Claim Rejections - 35 USC § 102

[8] The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

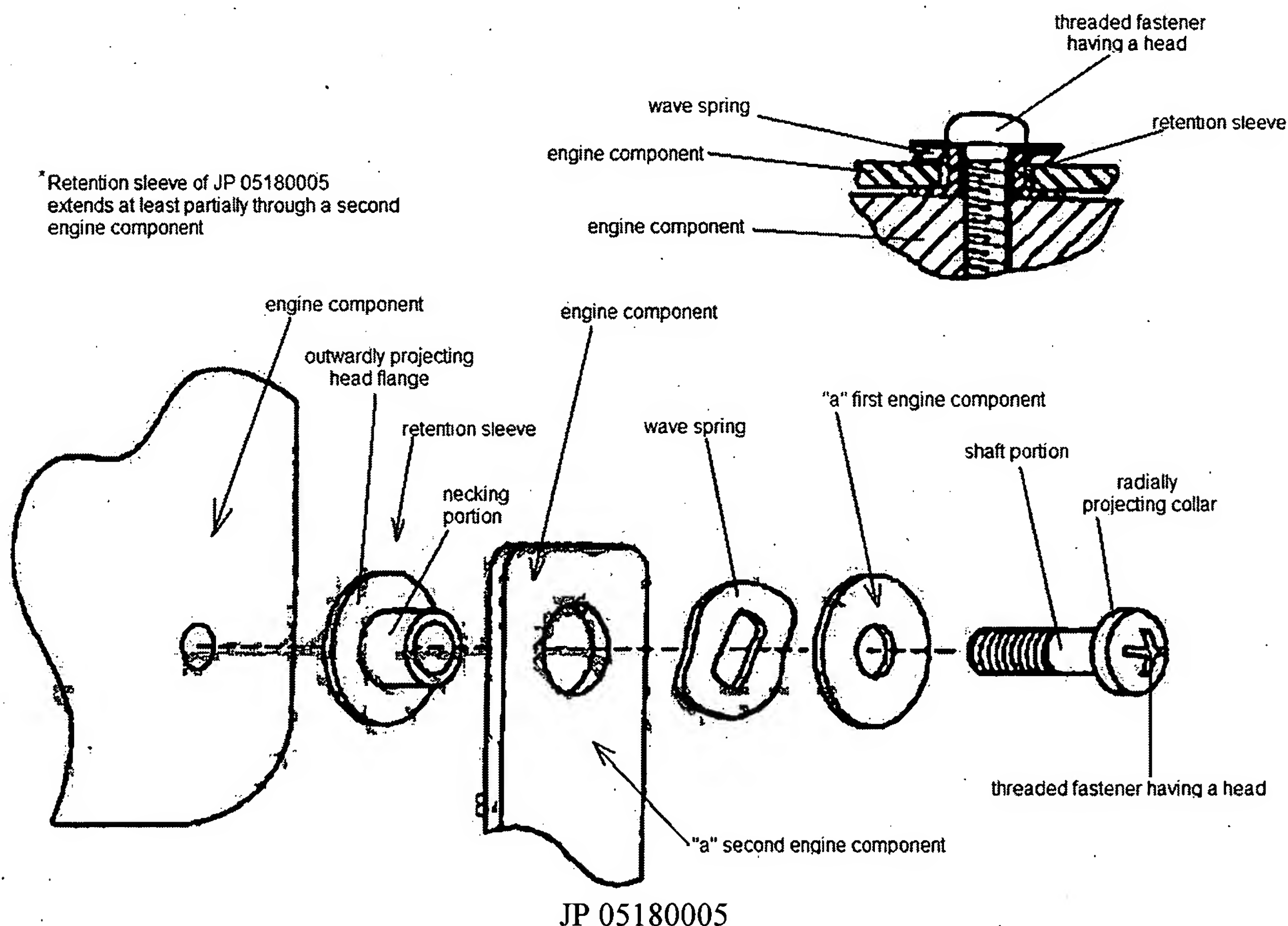
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

[9] As they are understood, claims 1, 3-8, 11, and 12 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by, JP 05180005. See annotated drawing below. JP 05180005 teaches or suggests, a retention sleeve (10b), wave spring (10c) disposed about the retention sleeve

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(10b), and a threaded fastener (10e) extending therethrough. The fastener assembly taught by JP 05180005 "generally" forms a seal between engine components (3) and (10). The examiner takes the position that no engine components are positively claimed. As for claims 11 and 12, JP 05180005 shows at least two fastener assemblies in Figure 5.



Claim Rejections - 35 USC § 103

[10] The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

[11] As they are understood, claims 1, 3, 4, 6-8, 11, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by, or in the alternative, under 35 U.S.C. 103(a) as being obvious over JP 11050842.

In short, JP 11050842 teaches a fastener assembly for connecting two components (1,2) of an engine, said assembly comprising:

a threaded fastener(s) (4) having a head portion with radially projecting collar (unlabeled),

a retention sleeve (3) disposed about said fastener having an outwardly projecting head flange (3b), and having a necking portion extending away from the flange portion which is of smaller diameter than said projecting head flange; said retention sleeve extending at least partially into an aperture formed in a first engine component (1,3a,5), and

a wave spring(s) (6) disposed about the retention sleeve which has an inner diameter slightly larger than an outer diameter of the retention sleeve, said wave spring abutting the retention sleeve such that it is "selectively" prevented from being fully compressed (shown clearly in drawing);

wherein the fastener assembly "generally" maintains a seal between said two components (1,2).

*Pertinent to claims 11 and 12, Figure 2 of JP 11050842 shows multiple fasteners and wave springs to acoustically decouple two engine components.

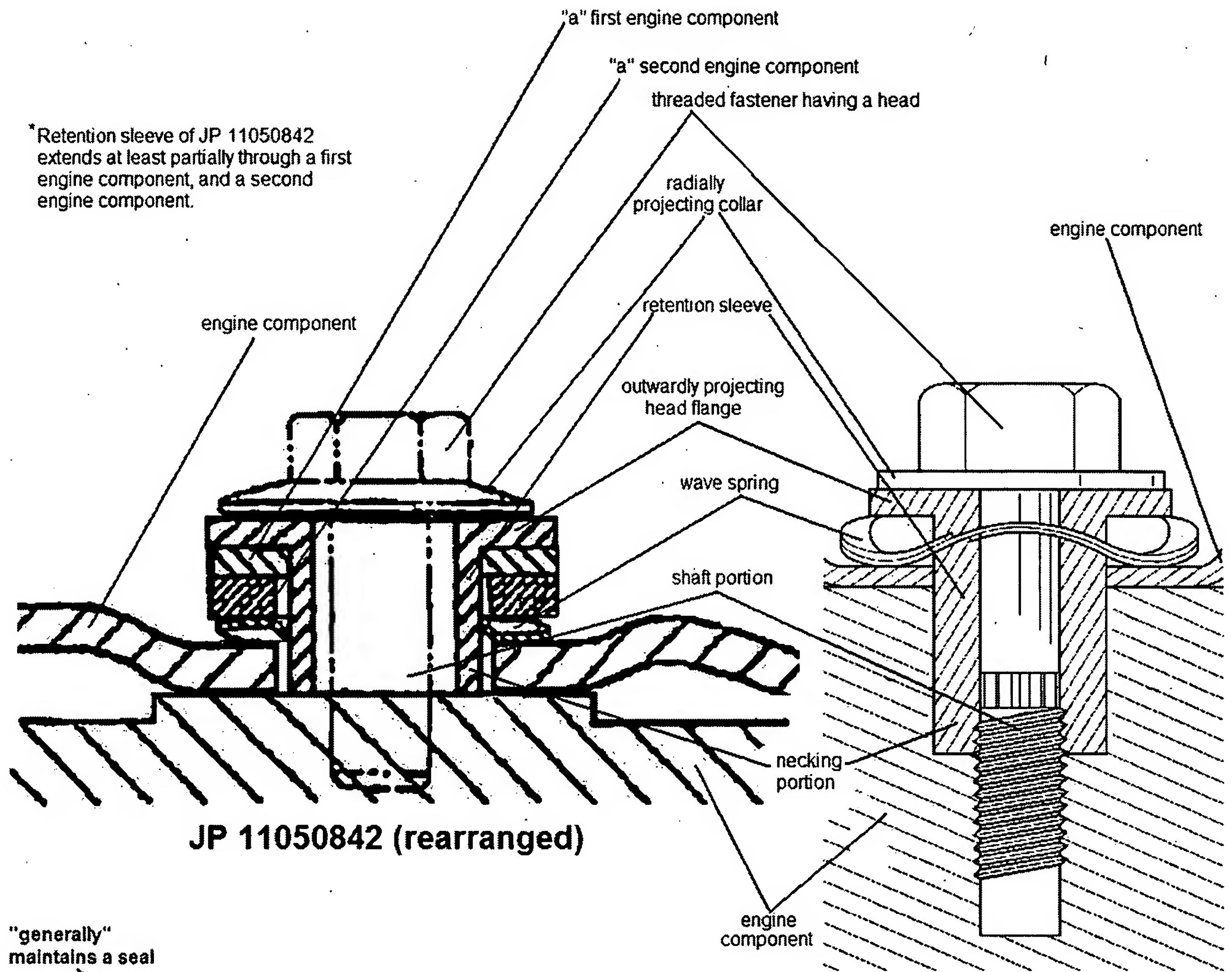
Applicant does not positively claim "a first engine component" or "a second engine component". However, JP 11050842 still shows in its broadest reasonable interpretation, "at

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least a portion of the retention sleeve selectively extends at least partially into an aperture formed in a first engine component (3a)" and "at least a portion of said retention sleeve selectively extends at least partially into an aperture formed in a second engine component (1 or 5)".

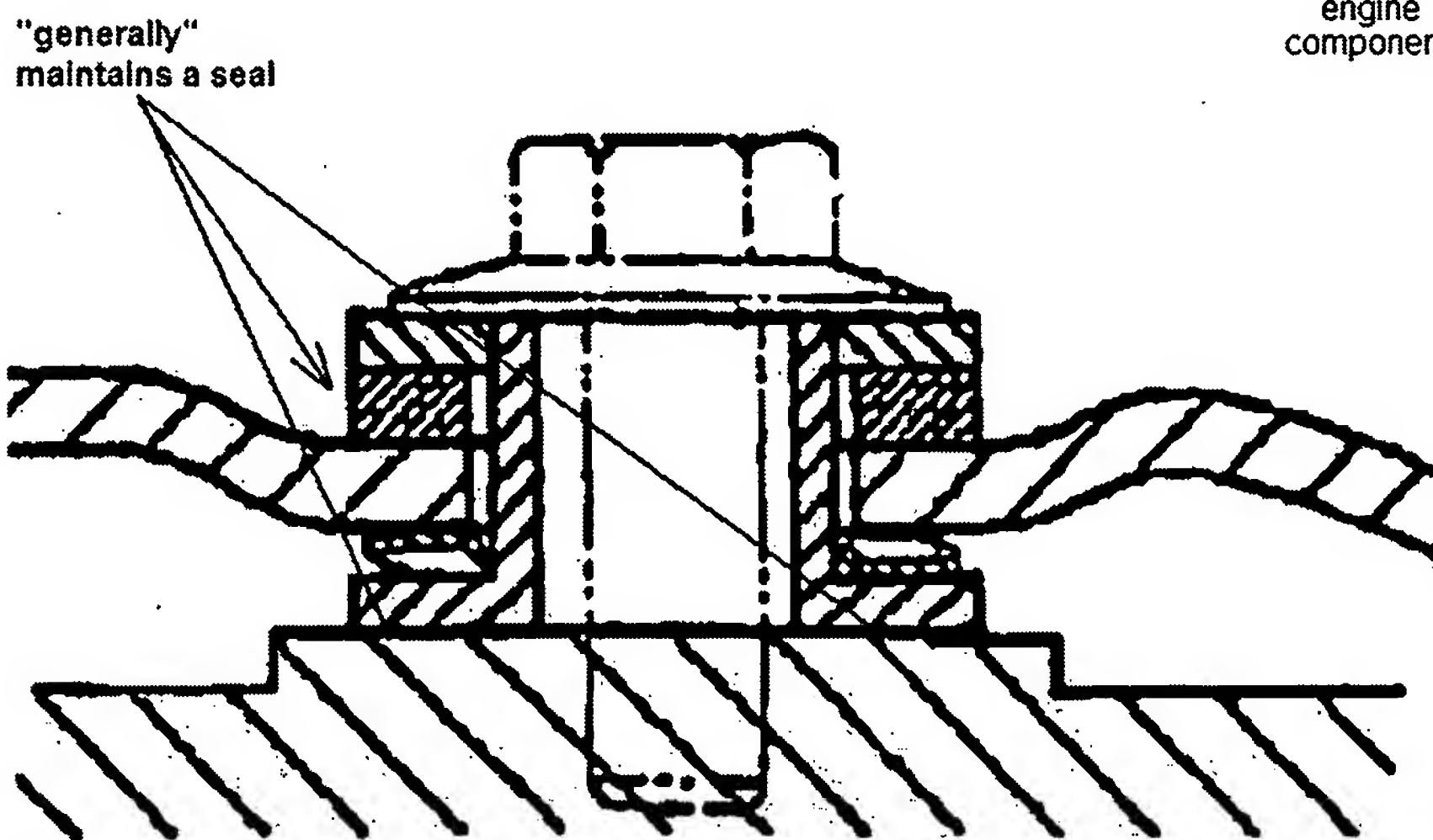
As for the limitation "while generally maintaining a seal therebetween", Applicant does not positively claim that the "seal" of the present invention comprises. Applicant argues that mesh (5) does not create a seal because it is not essentially airtight or watertight. However, the limitation "seal" is not limited in the claims in such a manner. The examiner takes the position that the component 5 creates a "seal" against highly viscous fluids and large solid contaminants. Flange (3b) and wave spring (6) further create a (broad) "seal" between engine components (1) and (2).

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JP 11050842 (rearranged)

Present invention



JP 11050842

JP 11050842

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[12] As it is understood, claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11050842 in view of the old and well-known.

In short, JP 11050842 teaches or at least suggests each and every limitation found in claim 1.

However, the English translation abstract of JP 11050842 appears to be silent as what material the assembly parts are manufactured from (herein, "metallic material").

It is generally accepted and well-known within the art that spring washers are made of metallic material, and that almost all bolts are made of metallic material (especially those used to secure valve covers to engine blocks), and that components in extreme heat environments full of high stresses such as engines are made from metallic materials.

Therefore, at the time of invention, it would have been obvious to one of ordinary skill in the art, to make the fastener assembly components taught by JP 11050842 from a metallic material, as it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

In re Leshin, 125 USPQ 416. It is also common knowledge to choose a material that has sufficient strength, durability, flexibility, hardness, etc. for the application and intended use of that material. In the instant case, it would be readily appreciated by those of ordinary skill in the art, to make engine components subjected to heat and stress from a metallic material for obvious reasons.

[13] As they are understood, claims 10, 19, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11050842 in view of Schmidt, Jr. US-5,711,711.

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In short, JP 11050842 teaches each and every limitation found in claims 1, 3, 4, 6-8, 11, and 12, including the inherent acoustic decouplement of at least two engine components (1,2);

However, the JP 11050842 fails to disclose expressly, at least one of the engine components to be a valve cover, and also fails to mention the retention sleeve having an inner diameter smaller than the outer diameter of the shaft.

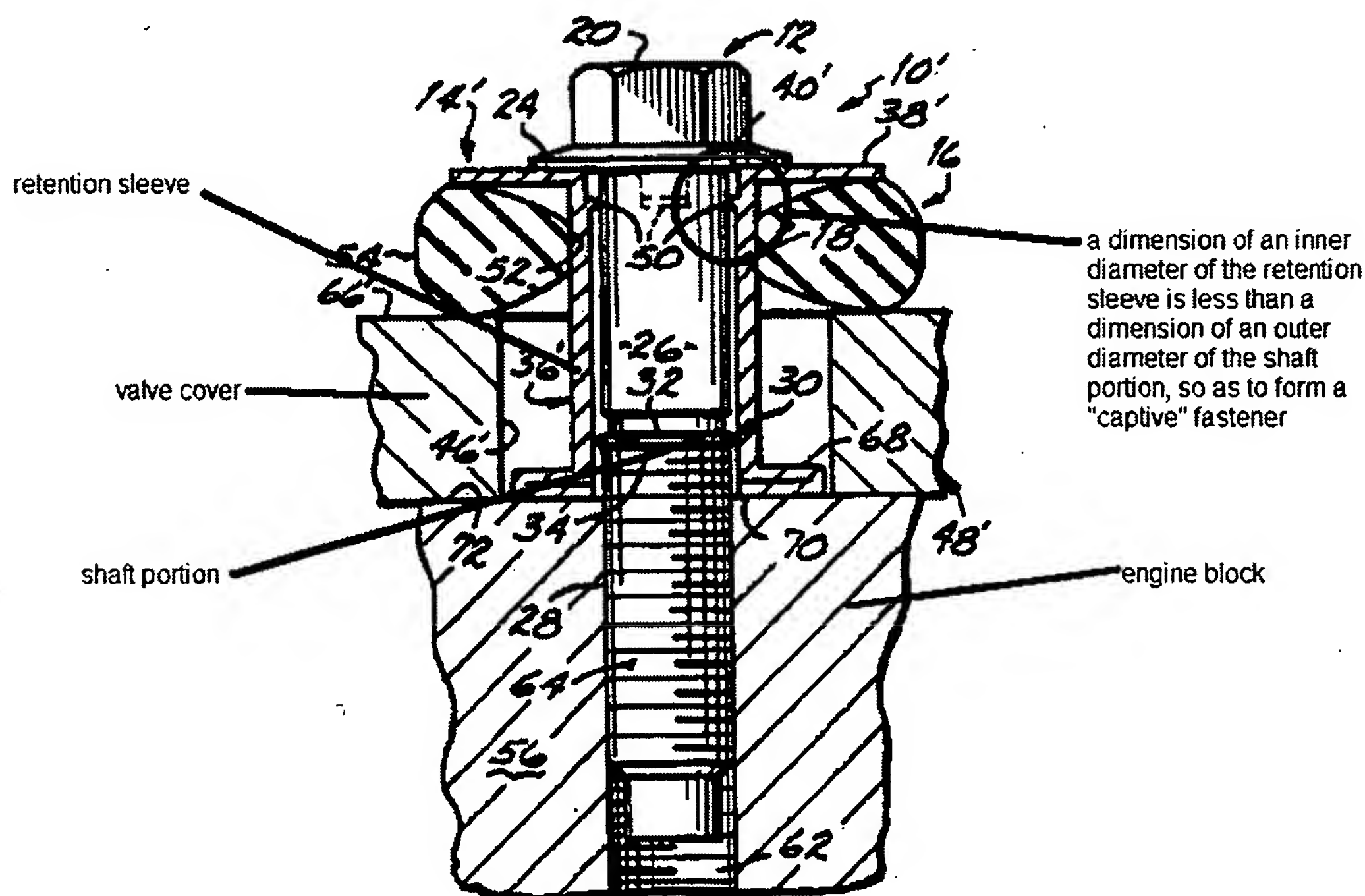
Schmidt, Jr. suggests a fastener assembly for mounting an upper workpiece to a lower workpiece, and mentions an application where it could be advantageously used to mount a valve cover to an engine block. This would suggest to one of ordinary skill that fastener assemblies, in general, could be used to join valve covers and engine blocks as an *intended use* of the fastener assembly.

Therefore, it would have been obvious to one of ordinary skill in the art, to employ the fastening assembly taught by JP 11050842 in between a valve cover and engine block as suggested by Schmidt, Jr., in order to "sufficiently absorb expansions and contractions caused by heat" between a valve cover and engine block. This would be an especially advantageous intended use, when the valve cover is made of a plastics material, which would expand and contract differently than an engine block. Note that it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham, 2 USPQ2d 1647 (1987)*. In the instant case, Applicant is claiming a fastener apparatus "for coupling at least two automotive components" (intended use), and is not positively claiming "a valve cover assembly comprising" in the preamble.

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Schmidt, Jr. also suggests a retention sleeve having an inner diameter smaller than an outer diameter of the threaded fastener shaft, in order to keep the two parts from separation. One of ordinary skill in the art would further appreciate that this fastener "sub-assembly" may also help reduce manufacturing costs, reduce assembly time, and prevent inadvertent loss of the bolt(s) when the valve cover is taken off. It has been held to be within the general skill of a worker in the art to make plural parts unitary as a matter of obvious choice. *In re Larson*, 144 USPQ 347 (CCPA 1965); *In re Lockart*, 90 USPQ 214 (CCPA 1951).

Therefore, at the time of invention, it would have been obvious to one of ordinary skill in the art, to modify the respective diameters of the fastener shaft and retention sleeve taught by JP 11050842 such that the retention sleeve has an inner diameter smaller than that of the fastener shaft as suggested by Schmidt, Jr., in order to achieve any or all of the abovementioned advantages.



Schmidt, Jr. US-5,711,711

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[14] As they are understood, claims 10, 19, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 05180005 in view of Schmidt, Jr. US-5,711,711.

In short, JP 05180005 discloses a fastener element having each and every limitation disclosed in claims 1, 3-8, 11, and 12, as discussed above.

However, JP 05180005 fails to disclose expressly, one of the two automotive components to be a valve cover, and also fails to suggest that a dimension of an inner diameter of the retention sleeve is less than a dimension of an outer diameter of the shaft portion.

Schmidt, Jr. suggests a fastener assembly for mounting an upper workpiece to a lower workpiece, and mentions an application where it could be advantageously used to mount a valve cover to an engine block. This would suggest to one of ordinary skill that fastener assemblies, in general, could be used to join valve covers and engine blocks as an *intended use*.

Therefore, it would have been obvious to one of ordinary skill in the art, to employ the fastening assembly taught by JP 11050842 in between a valve cover and engine block as suggested by Schmidt, Jr., in order to "sufficiently absorb expansions and contractions caused by heat" between a valve cover and engine block, especially when the valve cover is made of a plastics material, which would expand and contract differently than an engine block. Note that it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham, 2 USPQ2d 1647 (1987)*. In the instant case, Applicant is claiming a fastener apparatus "*for* coupling at least two automotive components" (intended use), and is not positively claiming "a valve cover assembly comprising" in the preamble.

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Schmidt, Jr. also suggests a retention sleeve having an inner diameter smaller than an outer diameter of the fastener shaft, in order to keep the two parts from separation. One of ordinary skill in the art would further appreciate that this fastener "sub-assembly" may also help reduce manufacturing costs, reduce assembly time, and prevent inadvertent loss of the bolt. It has been held to be within the general skill of a worker in the art to make plural parts unitary as a matter of obvious engineering choice. *In re Larson*, 144 USPQ 347 (CCPA 1965); *In re Lockart*, 90 USPQ 214 (CCPA 1951).

Therefore, at the time of invention, it would have been obvious to one of ordinary skill in the art, to modify the respective diameters of the fastener shaft and retention sleeve taught by JP 11050842 such that the retention sleeve has an inner diameter smaller than that of the fastener shaft as suggested by Schmidt, Jr., in order to achieve any or all of the abovementioned advantages.

New Grounds of Rejection

Claim Rejections - 35 USC § 112

[15] The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

[16] Claims 1, 3-8, 10-12, 19, and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Independent claims 1 and 7 recite "the first engine component" and "the second engine component" without proper antecedent basis. The preamble allows for at least two engine

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components, but these are not positively recited. Dependent claims 3-6, 8, 10-12, 19, and 21 suffer from the deficiencies of claims 1 and 7. The claims have been treated as they are definite.

Claim Rejections - 35 USC § 102

[17] As they are understood, claims 1, 3-8, 10-12 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Toelke et al. US-2002/0088299 A1 Figure 7, paragraph 0009 last four lines, and paragraph 0011 last three lines.

In short and in its broadest reasonable interpretation, Toelke et al. teaches: a fastener assembly for reducing vibration (i.e., "acoustic decouplement"), which could be used with two engine components, one possibly being a valve cover as an intended use, said fastener assembly comprising: a threaded fastener (36, paragraph 0041 lines 9-11) having a head and shaft portion, a retention sleeve (44) having a head flange (52), which in a sense limits compression of a wave spring (58) via the shouldered threaded fastener (36) configuration and the axial length of the retention sleeve (44), said wave spring (58) having an inner diameter sized larger than an outer diameter of said retention sleeve (44) and being disposed "ABOUT" the retention sleeve (note: the term "about" does not mean "radially surrounding"), the fastener assembly having the inherent capability of forming a seal between two non-claimed automotive components.

As for claims 10 and 21, Applicant is modifying an intended use of the fastener assembly. In other words, the fastener assembly of the present invention is "FOR" coupling at least two engine components (not claimed)-- one of said engine components (not claimed) being a valve cover (not claimed). Since no combination is positively recited, and an issue of indefiniteness remains, the valve cover limitation has been given little patentable weight.

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As for claim 11, Toelke et al. show multiple fasteners in the drawings. Applicant does not require the fasteners joining at least two components of an engine. Rather, Applicant only requires multiple fasteners which may be suitable for use with engine components.

Claim Rejections - 35 USC § 103

[18] The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

[19] As it is understood, claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Toelke et al. US-2002/0088299 A1 in view of Braun et al. US-6,623,226.

In short, and as described above, Toelke et al. substantially teaches each and every limitation found in claim 1.

However, Toelke et al. fails to disclose expressly, an inner diameter of the retention sleeve being less than a dimension of an outer diameter of the shaft portion.

Braun et al. suggests making an inner diameter of a retention sleeve less than a dimension of an outer diameter of a shaft portion, in order to effectively captivate a threaded bolt member, and prevent loss separation.

Therefore, at the time of invention, it would have been obvious to one of ordinary skill in the art to modify the retention sleeve taught by Toelke et al., to have an inner diameter less than the threaded member shank as suggested by Braun et al., in order to effectively captivate a

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threaded bolt member, and prevent loss or separation of said threaded bolt member from the retention sleeve.

Conclusion

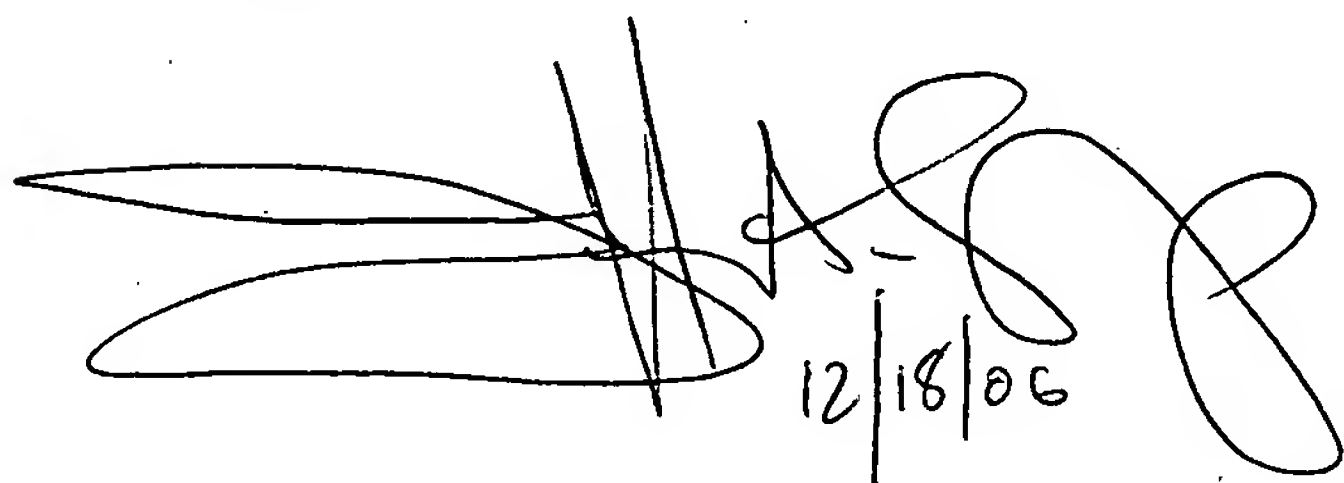
[20] The prior art made of record and not relied upon is considered pertinent to applicant's disclosure is as follows: **See form PTO-892.**

[21] Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey Sharp whose telephone number is (571) 272-7074. The examiner can normally be reached 7:00 am - 5:30 pm Mon-Thurs.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J.J. Swann can be reached on (571) 272-7075. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JAS



Handwritten signature and date 12/18/06



ROBERT J. SANDY
PRIMARY EXAMINER